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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/642,420	08/15/2003	Vincent Quiquempoix	068354.1338	1455
23640	7590	04/06/2004	EXAMINER	
BAKER BOTTS, LLP 910 LOUISIANA HOUSTON, TX 77002-4995			YOUNG, BRIAN K	
			ART UNIT	PAPER NUMBER
			2819	
DATE MAILED: 04/06/2004				

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/642,420

Applicant(s)

QUIQUEMPOIX ET AL.

Examiner

Brian Young

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 15 August 2003.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-20 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 1-7 and 20 is/are allowed.
- 6) ☒ Claim(s) 8 and 14 is/are rejected.
- 7) ☒ Claim(s) 9-13 and 15-19 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____

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1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

2. Claims 8 and 14 are rejected under 35 U.S.C. 102(b) as being anticipated by McCaslin et al.

Claim 8 recites "A method of filtering a signal, including: integrating the signal to produce an integrated signal; selectively differentiating the integrated signal using a programmable counter to produce a differentiated signal, wherein the integrated signal is differentiated according to one or more programmable frequency notches; and resampling the integrated signal at a frequency lower than a clock frequency".

Claim 14 further adds the limitation that the filter is utilized in a delta-sigma ADC.

McCaslin et al recite (col.1,Ins.10-19) "Typical **sigma/delta analog-to-digital converters** have a modulator for digitizing a received analog signal and a low pass filter for **filtering and decimation**. The low pass filter may include an **integrator circuit** which usually operates at a high system clock frequency and a **differentiator circuit** which samples down the system clock to a much lower frequency, typically called the baud rate clock. "

McCaslin et al disclose a decimation filter (col.3, Ins.4-30) "Referring to FIG. 2, there is illustrated a block diagram of the preferred embodiment of the present invention 10

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comprising **integrator circuit 12** having an input coupled to input terminal 14 and an output coupled to first and second input terminals of **differentiator circuit 16** via switches 15 and 17. Differentiator circuit 16 further has first and second outputs coupled to an multiplexer circuit 18 which is controlled by a select line 20 has a first and second outputs coupled to first and second inputs of an interpolation circuit 22 via delay elements 24 and 26. Interpolation circuit 22 further includes a third input coupled to BYPASS.sub.-- D1 signal 28 and a fourth input coupled to an interpolation phase variable (C) signal 30 and an output signal 32. The preferred embodiment further comprises coarse phase jump circuitry 33 which includes delay elements 34 and 36 coupled between the output of integrator circuit 12 and the first and second inputs, respectively, of differentiator circuit 16 and has a controller inputs including SEL.sub.-- m, 29 and SEL.sub.-- n, 31. Also, the preferred embodiment further comprises a counter circuit 37 coupled to differentiator circuit 16, and is clocked by a SYSTEM CLOCK 39 and has controller inputs including a COARSE.sub.-- JUMP.sub.-- EN signal 41, an ADVANCE.sub.-- PHASE signal 43 and a PRELOAD signal 45 for adding or deleting a system clock cycle delay to the baud clock.

McCaslin et al further recite "In addition, delay circuit 33 is **programmable to control the baud-clock delay** of the first and second comb filters by 0, 1 or 2 system cycles by adjusting the values of n and m of delay elements 34 and 36, respectively, by 0, 1, or 2, via control signals SEL.sub.-- m and SEL.sub.-- n."

3. Claims 1-7 and 20 are allowed.

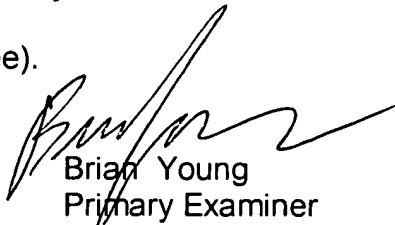
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4. Claims 9-13 and 15-19 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Brian Young whose telephone number is 571-272-1816. The examiner can normally be reached on Mon-Fri 7:30-4:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Mike Tokar can be reached on 571-272-1812. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



Brian Young
Primary Examiner
Art Unit 2819

bky